#631 February 2025

JUG

Publication of the Northern California Contest Club

NCCC

NCCC – 54 years of contesting excellence

Inside This Issue

Inside this Issue
President's Report
About NCCC
VP/CC Report
IDXC
Upcoming Contests
Short Weekly Radiosport
The Lumber Yard
Antenna of the Month
Morse Code for the Road
Tube of the Month
Editor Notes
W7RN For Sale
NCCC Information
--Lands End Store
--Elecraft K4
--Ham Radio Outlet

NCCC MEETING
https://nccc.cc/meetings.html
ZOOM

Tue 11 February
Tom Schiller, N6BT

President's Report

David West, KO6M

Greetings,

I hope the New Year has started off right for you, at least for contesting. It was a great January even though the month felt like it went on forever. I'll let Chris be the one to break down all the contest glory but it was a fun month.

Thank you to those that submitted their opinions for the survey. We will be reviewing the responses very soon (we will probably be doing it while you read this). There are some items we hope to be able to act upon relatively quickly and of course there are others that will take some time. Either way, we will of course try to guide the club in the manner you all would like.I know I had wanted to do more in person meetings but it turns out zoom just works so much easier to get people from out of the area to do presentations. This month we will be welcoming Tom, N6BT, back for another presentation. His last one was so widely accepted that I have been wanting to have him back again. Luckily for me, he accepted (and at the last minute). In March we will have a guest presenter speaking about his stations. No spoilers but it is one of the newer super stations in the country. So that will of course be on zoom. Then that brings us to April, Award time! I know Gary and the gang will be ramping up their presses for the awards very soon. We will be sending out details very soon for the time and place.

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About NCCC

Officers and Directors, 2023-2024 Contest Season

President: David West, KO6M
Vice-President/Contest Chairman: Chris Tate, N6WM
Secretary: Greg Alameda, KK6PXT
Treasurer: Nian Li, WU6P
Past President: David Jaffe, WD6T
Director: Jim Brown, K9YC
Director: John Miller, K6MM
Director: Ed Radlo, AJ6V

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Awards Chair: Gary Johnson, NA6O
California QSO Party Chair: Dean Wood, N6DE
QSL Mgr [K6ZM]: **vacant**
QSL Mgr [K6CQP/N6CQP/W6CQP]: Dean Wood, N6DE
NAQP Teams: v**acant**
NA CW Sprint Teams: Bob Vallio, W6RGG
NCCC Email Reflector Admin: Phil Verinsky, W6PK
Worked All CA Counties Award: Fred Jensen, K6DGW
Photographer: Bob Wilson, N6TV

NCCC Thursday Night Contesting

NCCC Sprint: Tom Hutton, N3ZZ
NS CW Ladder: Bill Haddon, N6ZFO
NS RTTY Sprint/Ladder: Ed Radlo, AJ6V

Communications

Webmaster: John Miller, K6MM
Webinars: Bill Fehring, W9KKN
Membership: Gary Johnson, NA6O/Ian Parker, W6TCP

JUG Editor

Fred Jensen, K6DGW: *k6dgwnv@gmail.com*
Home: 775.501.5488
Cell: 530.210.0778

Just after the Awards meeting we have IDXC. Historically of course and by name that is a DX convention but NCCC has of course been involved when we can be. This year is no different: our very own N6WM will be heading up Contest Academy, we will be hosting the NCCC Hospitality Suite, and I believe some of our very own members will be there to speak about their experiences with recent DXpeditions. It should be a great convention this year. Please look into attending if you are able to. April 11-13th in Visalia. More info at https://dxconvention.com/

Lastly, and this is the important one, several of us are stepping away from our Board positions at the end of this cycle. Chris, VP/CC, who has been our champion over the last 2 years. Greg, Secretary, who has been our glue the last 3 years. Myself, President, who has cooked some great BBQ. That's three core positions that will be vacant. Plus one of the Board of Directors, John, who has been a rock for me over the last 3 years will be stepping down. Please, please, consider stepping up for one of our positions. The commitment is as much as you can give to the club but also one meeting a month on zoom the week before the club meeting. Thinking of your survey response, this is a great way to help guide the club into what you would like it to be. We will be posting full descriptions soon.

Thank you and KB!

VP/CC

Chris, N6WM

Greetings my friends I hope your contest season has been going well. I am very busy this month, working hard on the CQWW RTTY article along with a very demanding period of work at my day job, so I will keep this one short and sweet.

Upcoming Focus Contests

During our monthly BoD meeting, the Board, as well as our Jug author asked what our upcoming focus events are. Lets talk a bit about that. The WPX CW and SSB contests are going to be focus events for us. In my opinion these contests should ALWAYS be focus contests for us here in Northern CA. The

multipliers are prefixes, and as far as International DX contests and CQ contests in general, these are events that we can potentially be quite competitive on an individual level, and depending our our level of critical mass, can actually make a dent on the club level as well. In any case, we should be throwing our resources to these contests and have some fun doing it. They will be here before you know it

DATES FOR CQ WPX CONTEST 2025
SSB: March 29 - 30, 2025
CW: May 24 - 25, 2025

So as I say.. mark your calendars now! Let you families know you will be committed these weekends. Get your stations ready.. read the rules and get ready to rumble, WPX Style!

A CALL FOR CONTEST ACADEMY PRESENTERS in VISALIA

The NCCC will once again sponsor a ½ day format CONTEST ACADEMY in Visalia on Friday April 11th. We have had some of our finest brain trust step up with offers to present, but we need MORE! Im hoping for someone who can either present on FT8 Contesting, as well as Little Pistol contesting techniques. PLEASE contact me immediately if this is something you can help out with, it's a great opportunity to get some visibility in the contesting community, teach and share your skills with new contesters and give back to the conteet community. We talk about ways you can contribute to our great club.. this is an excellent way to do that.. let me know!

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Upcoming Larger Contests

NAQP RTTY	22 Feb 1800z to 23 Feb 0600Z
ARRL Int'l DX	1 Mar 0000Z to 2 Mar 2359Z
NA Sprint SSB	23 Mar 0000Z - 0400Z
CQ WW WPX SSB	**29 Mar 0000Z to 30 Mar 2359Z**
Poisson d'Avril	1 Apr 0000Z to 2359Z

Red entries denote NCCC Focus contest

PEED	XXT	DAY	TIME (UTC)	EXCHANGE	SPONSOR LINK
25 wpm	MST	Monday	1300 - 1400z	Name and QSO serial number	International CW Council
25 wpm	MST	Monday	1900 - 2000z	Name and QSO serial number	International CW Council
25 wpm	MST	Tuesday	0300 - 0400z	Name and QSO serial number	International CW Council
+ wpm	CWT	Wednesday	1300 - 1400z	Name and CWops # (or S/P/C)	CWops
+ wpm	CWT	Wednesday	1900 - 2000z	Name and CWops # (or S/P/C)	CWops
+ wpm	CWT	Thursday	0300 - 0400z	Name and CWops # (or S/P/C)	CWops
+ wpm	CWT	Thursday	0700 - 0800z	Name and CWops # (or S/P/C)	CWops
0 wpm	SST	Friday	2000 - 2100z	Name and S/P/C	K1USN
0 wpm	SST	Monday	0000 - 0100z	Name and S/P/C	K1USN

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THE LUMBER YARD

Awards and Kudos for NCCC Members

Jim Peterson, K6EI

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Antenna of the Month

Moxon

Gary, NA6O

Given a chance, most hams would prefer to have a Yagi up on a tower for as many bands as possible. It's horizontally polarized, has good forward gain and rejects signals off the back and sides... A great combination. But sometimes there is an issue of space because the elements can be quite long. Fortunately a fellow named Les Moxon G6XN (SK) a British ham, came up with a simple way to shrink a conventional 2-element Yagi to about 70% of original length without compromising performance. In fact, it's front-to-back ratio is actually superior.

The basic outline of a **Moxon rectangle** antenna appears in Fig. 1. It's really just a two-element Yagi with the element tips bent at 90 degrees. In fact, the total lengths are the same: A half wavelength for the driven element, and about 5% longer for the reflector. The trick is that the bend locations and the gaps between the elements have to be optimized to give you the best front-to-back ratio, gain, and a good 50-ohm match. In fact, the dimensions are fairly critical if you want peak performance.

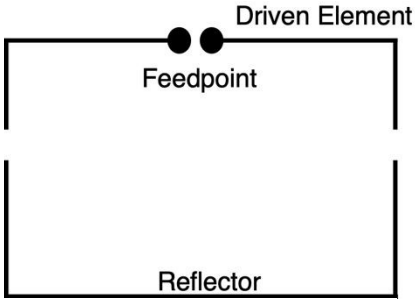

Fig 1-Basic layout of the Moxon rectangle antenna

Like many antenna designs, this one is evolutionary. The last great contribution was by L. B. Cebik W4RNL (SK) who studied it in depth and came up with a set of equations that provide those important optimized dimensions [Ref. 1]. And to make life really easy for us all, Dan Maguire AC6LA as written a dedicated application (*Moxon Rectangle Generator*, Fig. 2) that gives you the magic numbers [Ref.2]. You simply supply the frequency and the size of the wire or tubing. What could be easier? His program even supplies an output for simulators including EZNEC in case you want to explore further. I should also mention that the bent-element concept has been further adapted and morphed into many other designs including the popular Spiderbeam and Hexbeam. Good ideas do seem to propagate.

Construction

You can build a Moxon from either wire or tubing but most designs are based on wire supported by lightweight fiberglass spreaders in an X-shaped configuration. Look up Moxon construction on the web and you'll find many practical examples. An interesting adaption for 40 m was designed by Dave Leeson N6NL who modified a Hy-Gain XM240 2-element Yagi to achieve superior pattern and greater bandwidth in the same compact footprint. This has been very popular and is easy to build [Ref. 3].

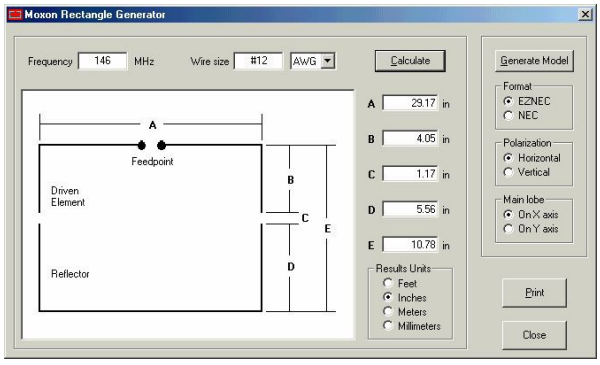

Figure 1. Screenshot of the Moxon Rectangle Generator *(courtesy AC6LA)*

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Performance

Compared to a regular 2-element Yagi, an equivalent Moxon will yield a forward gain only a fraction of a dB less. But it's distinct lack of rear lobes is remarkable, reliably down 20 dB versus only 10-12 dB for the most common Yagi designs. It achieves this in a manner similar to a loop-fed array (LFA) Yagi via the added coupling provided by the end wires. Those perpendicular wires give the designer an extra degree of freedom when optimizing the pattern. Results are shown in Cebik's report. Also, the Moxon has excellent bandwidth in terms of SWR–much better than Yagis shortened with coils.

Conclusion

The Moxon rectangle is really a win-win design and its popularity including its many derivatives is well deserved.

References

1. L. B. Cebik, W4RNL (SK), Designing Moxon Rectangles by Equation and by Model. *http://on5au.be/content/a10/moxon/moxgen.html*

2. Moxon Rectangle Generator Application by AC6LA. *https://ac6la.com/moxgen1.html*

3. W6NL Moxon on a Cushcraft XM240. *https://ac6la.com/moxgen1.html*

Morse Code For The Road

Musings For A Slow News Month

Driving I-5[1] south from Sacramento repeatedly for my then-employer, I tired of my CD music stash and the radio drifted into Spanish the further south I went. Using MorseGen, I created Morse MP3 files of some things I wanted to read and then "read" them during the drive. Finding text files was a bit of a problem though.

Tom Perera, W1TP, who hosts a telegraph equipment group mentioned Duane McGuire, WA7PGE's collection of MP3 files with plaintext, sort of conversational CW with a variety of poems, Winnie-the-Poo selections, and selections from Stevenson's "A Child's Garden of Verses" at speeds from 12 to about 40 WPM. Duane has made them available at

https://duanemcguire.nyc3.cdn.digitaloceanspaces.com/cw-books/winnie-the-pooh/idx2.html

KY8D has a bunch of "CW Books" at https://starling.us/free/morse/ He's written a tool in Perl but you don't neeed the tool or Perl to play the files.

MorseGen was written by G4ILO who is now SK, but folks in G-Land are maintaining his website which is full of a number of cool little ham applications.

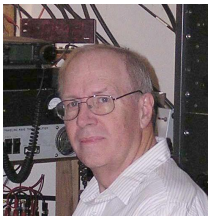
1 I-5 So of Stockton is fractal. "Any arbitrarily chosen segment looks exactly like any other arbitrarily chosen segment."

Tube of theMonth

Norm Wilson, N6JV

Visit the Tube Museum at *n6jv.com*

RS55i



After the first World War, the German company Telefunken continued to expand and innovate their product line of tubes. This was the period when commercial use of the radio spectrum became popular. Military designs were being improved and became more powerful. The RS55 was an early development. At over 8 inches long, it seems very conservative for a 12-watt tube. The maximum plate voltage is 700 at 35 ma. The Tungsten filament operated at 10 volts drawing 3 amps. The low output capacity allowed the tube to be operated up to 15 meters. The base has 3 banana plugs so a socket could be easily fabricated. The plate connection is a typical flat, knurled nut.

Telefunken marked the envelope of their tube using glass etching. Below the company name are the letters D.R.P. which stand for "Deutsches Reichts Patent" or German Empire Patent. This marking was common on German products of this period. Below the patent is marked Type RS55 I. The "I" indicates that there have been improvements to the original design, but nothing that would affect the original operating perameters. The 10 V filament marking is also included before the serial number.

2024 CQP Club Results

Dean and the CQP Committee have published the final 2024 CQP Club results. It's a fairly impressive group. You can view them at ***https://cqp.org/results/2024/CQP_2024_CA_Club_Results.pdf***

Editor Notes

Whatever Oracle that is constitutionally charged with determining such things announced that the peak of Sunspot Cycle 25 has been achieved sometime toward the latter half of 2024. Oracles deal in the imprecise and predicting events with "Sunspots" in their name is even less precise so it would be a mistake to think it will all be over next Wednesday. And, occasionally, the 11 year cycles have exhibited a double peak. At any rate, 25 is the seventh cycle in my ham lifetime [so far]. The full cycle is actually 22-23 years in length, the leading magnetic polarity of sunspot groups reverses from one 11 year period to the next but has no effect on what we care about

W7RN FOR SALE

Due to escalating medical issues, K5RC and K7AFO will be moving to a retirement community outside Houston in summer 2025. We would like to sell to a Contester/DXer to continue the legacy of W7RN. The station has been dubbed *"Every Ham's Dream."*

Details can be found at *www.w7rn.com/w7rn-for-sale*

Tom Taormina
K5RC 370 Panamint Rd
Reno NV 89521
775-846-7068

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NCCC Membership Information

If you wish to join NCCC, please fill out an application for membership, which will be read and voted upon at our monthly meeting. To join, you must reside within club territory which is defined as everything in California north of the Tehachapi's up to the Oregon state line, and part of northwestern Nevada (anything within our ARRL 175-mile radius circle centered at 10 miles north of Auburn on Highway 49).

Life Memberships

Life memberships are $250.00 Contact secretary.nccc@gmail.com. Members who have reached 80 years of age have and been an NCCC member for 20 or more years are eligible for Honorary Life Membership ("80/20 Rule"). Contact secretary.nccc@gmail.com

JUG Articles Wanted!

Your help allows us to produce a quality newsletter. Please consider submitting an article! The editor welcomes any and all relevant articles for inclusion in the JUG. The preferred format is plain, unformatted ASCII text, MS Word (.doc/.docx) are acceptable. Indicate the insertion point and title of diagrams and pictures in the text and attach photos/diagrams separately. Pictures should be as high a resolution as available. Please do not spend time formatting your submittal, the publication templates will re-format everything. Send your material to *k6dgwnv@gmail.com* indicating "JUG Submittal" in the subject.

Northern California Contest Club Reflector—Guidelines

The NCCC email reflector is devoted to the discussion of contesting. Topics include contests, station building, dxpeditions, technical questions, contesting questions, amateur radio equipment wants/sales, score posting, amateur radio meetings/ conventions, and membership achievements. Postings may not include personal attacks, politics, or off-subject posts. Such postings will be considered a violation of the Guidelines

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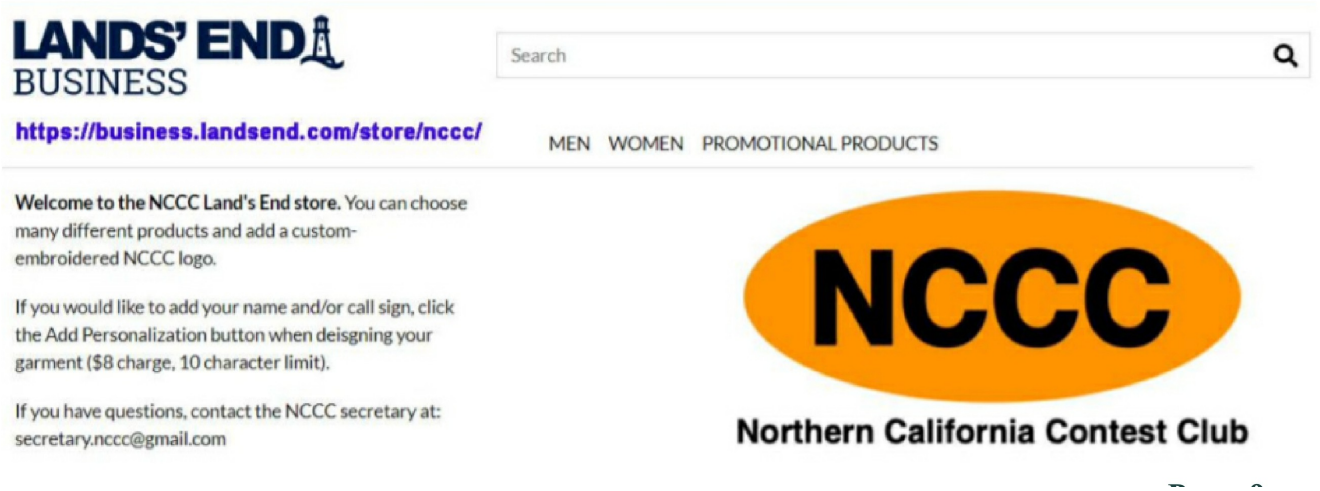
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If you have questions, contact the NCCC secretary at: secretary.nccc@gmail.com
NCCC
Northern California Contest Club

NCCC Lands' End Store

We are pleased to announce that the new NCCC Land's End store is online! You can choose from an array of shirts, jackets, and hats and apply your choice of custom-embroidered NCCC logos: A plain one, or one that also says Fifty Years. And, you can personalize your item by adding your name and/or call sign. The store is open 24/7 and items are shipped directly to you. No more waiting for everyone else to make up their minds on a group purchase.

https://business.landsend.com/store/nccc/ or from the NCCC website: http://nccc.ccc/members/lestore.html
Thanks to W6TCP for helping to set this up. Instructions for purchases from Lands' End NCCC Store

1. Go to https://business.landsend.com/store/nccc/
2. Click on Men's or Women's link, then choose item(s)
3. Pick color, inter quantity of each size you want to order.
4. Click Apply Logos and Personalizations. This will display the logo choices. Try them out. It will show you what they look like on your chosen fabric color.
5. Select a location for logo (left side, ride side, back, etc)
6. Click Apply Logo.
7. Optionally, click Add Personalization to add your name or call sign ($8.00, 10 character limit)
8. Click Add to Bag and Continue Shopping or.

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A direct-sampling SDR you'll love to use

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Modular, hybrid architecture adapts to your needs

The basic K4 covers 160-6 m, with dual receive on the same or different bands. The K4D adds diversity receive, with a full set of band-pass filters for the second receiver. (Thanks to direct RF sampling, there's no need for crystal filters in either the K4 or K4D.) The K4HD adds a dual superhet module for extreme-signal environments. Any K4 model can be upgraded to the next level, and future enhancements--such as a planned internal VHF/UHF module--can be added as needed.

Single or dual panadapter, plus a high-resolution tuning aid

The main panadapter can be set up as single or dual. Separate from the main panadapter is our per-receiver *mini-pan* tuning aid, with a resampled bandwidth as narrow as +/- 1 kHz. You can turn it on by tapping either receiver's S-meter or by tapping on a signal of interest, then easily auto-spot or fine tune to the signal.

Comprehensive I/O, plus full remote control

The K4's rear panel includes all the analog and digital I/O you'll ever need. All K-line accessories are supported, including amps, ATUs, and our K-Pod controller. The Video output can mirror the K4 screen or display a high-res Panadapter only screen. Via Ethernet, the K4 can be 100% remote controlled from a PC, notebook, tablet, or even another K4, with panadapter data included in all remote displays. Work the world from anywhere--in style!

K4 KEY FEATURES

- Optimized for ease of use
- Modular, upgradeable design
- 7" color screen with touch and mouse control
- ATU with 10:1+ range, 3 antenna jacks
- Up to 5 receive antenna sources
- Full remote control via Ethernet

The K4 interfaces seamlessly with the KPA500 and KPA1500 amplifiers

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• HF/50/144/430/440 MHz Multi-band, Multi-mode, IF DSP • D-STAR DV Mode (Digital Voice + Data) • Intuitive Touch Screen Interface • Built-in RTTY Functions

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Real-time Spectrum Scope with Automatic Scope Control • Multi-color waterfall display • State of the art 32-bit Digital Signal Processing System • 3kHz Roofing Filter for enhanced performance • 3.5 Inch Full Color TFT USB Capable • Internal Automatic Antenna Tuner • High Accuracy TCXO

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• 1200/9600bps APRS® Data Communications • 2" High-Res Full-Color TFT Display • High-Speed Band Scope • Advanced C4FM Digital Mode • Voice Recording Function for TX/RX

FTM-400XD | *2M/440 Mobile*

• Color display-green, blue, orange, purple, gray • GPS/APRS • Packet 1200/9600 bd ready • Spectrum scope • Bluetooth • MicroSD slot • 500 memory per band

FT-70DR *C4FM/FM 144/430MHz Xcvr*

• System Fusion Compatible • Large Front Speaker delivers 700 mW of Loud Audio Output • Automatic Mode Select detects C4FM or Fm Analog and Switches Accordingly • Huge 1,105 Channel Memory Capacity • External DC Jack for DC Supply and Battery Charging

FT-5DR *C4FM/FM 144/430 MHz Dual Band*

• High-Res Full-Color Touch Screen TFT LCD Display • Easy Hands-Free Operation w/Built-In Bluetooth© Unit • Built-In High Precision GPS Antenna • 1200/9600bps APRS Data Communications • Supports Simultaneous C4FM Digital • Micro SD Card Slot

FT-65R | *144/430 MHz Transceiver*

Compact Commercial Grade Rugged Design • Large Front Speaker Delivers 1W of Powerful Clear Audio • 5 Watts of Reliable RF Power Within a compact Body • 3.5-Hour Rapid Charger Included • Large White LED Flashlight, Alarm and Quick Home Channel Access

FTM-6000R | *50W VHF/UHF Mobile Transceiver*

• All New User Operating Interface-E2O-III (Easy to Operate-III) • Robust Speaker Delivers 3W of Clear, Crisp Receive Audio • Detachable Front Panel Can Be Mounted in Multiple Positions • Supports Optional Bluetooth® Wireless Operation Using the SSM-BT10 or a Commercially Available Bluetooth® Headset

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